



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,430	09/29/2000	Timothy J. Tucker	TDT-01	3859

29847 7590 02/04/2004

BEUSSE BROWNLEE WOLTER MORA & MAIRE  
390 N. ORANGE AVENUE  
SUITE 2500  
ORLANDO, FL 32801

EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 02/04/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/675,430

Applicant(s)

TUCKER ET AL.

Examiner

Paul D Kim

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7,9-16 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9-16 and 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This office action is a response to the restriction requirement filed on 11/7/2003.

#### ***Response to the Restriction Requirement***

2. Applicant's election with traverse of Group III, claims 1, 3, 5, 7, 9-16 and 19-25, in Paper No. 9 is acknowledged. The traversal is on the ground(s) that all the claims as filed would not require additional searching, not place any undue burden on the patent office. This is not found persuasive because these inventions (Group I and II) are distinct for the reasons given last office action on Paper No. 8 and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. Also, the subcombination (Group IV) has separate utility such as processes of stretching, pressing, cutting and separating for the reasons given last office action on Paper No. 8.

The requirement is still deemed proper and is therefore **made FINAL**.

3. Applicant hereby cancelled the non-elect claims 2, 4, 6, 8, 17, 18 and 26-30 in Paper No. 9.

#### ***Specification***

4. The disclosure is objected to because of the following informalities: In "BRIEF DESCRIPTION OF THE DRAWINGS" on page 4, the phrase "Fig. 1 contains..." should be corrected including descriptions of each figures.

Appropriate correction is required.

Art Unit: 3729

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A PROCESS OF MANUFACTURING OF ELECTROSTATIC SPEAKERS--.

### ***Claim Objections***

6. Claims 7, 9-16 and 21-25 are objected to because of the following informalities:

Re. Claim 7: The phrase "said one electrical circuit" recited in line 9 should be changed to --said at least one electrical circuit--.

Re. Claim 9: The phrase "the area" recited in line 3 should be changed to --an area--.

Re. Claim 19: The phrase "the excess membrane" recited in lines 2-3 should be changed to --an excess membrane--.

Re. Claim 21: The phrase "the passage" recited in line 3 should be changed to --a passage--.

Re. Claim 23: The phrase "the raised structures" recited in line 2 should be changed to --the raised structure--.

The phrase "the compressive forces" recited in line 3 should be changed to --compressive forces--.

Re. Claim 24: The phrase "the distal end" recited in line 4 should be changed to --a distal end--.

Art Unit: 3729

Re. Claim 25: Claim 25 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 25 recites a limitation "wherein one side of the ESL has...a listening subject" recited in lines 1-3.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 7, 9-16 and 19-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re. Claim 1: The phrase "optionally comprising" recited in line 23 and lines 25-26 renders the claim vague and indefinite. It is unclear as to whether the opposing structure includes at least one stator and electrical circuitry to the at least one stator or not.

Re. Claim 7: The phrase "optionally comprising" recited in line 6 renders the claim vague and indefinite. It is unclear as to whether the opposing structure includes at least electrical circuit or not.

Art Unit: 3729

Re. Claim 19: The phrase "as by cutting, heating, or pressing" recited inline 2 renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Re. Claim 20: The phrase "heating an affixed ESL for a sufficient time to make the membrane taut" recited in lines 2-3 renders the claim vague and indefinite. It is unclear as to where the affixed ESL is located and what the affixed ESL is. It is also unclear as to how the membrane is taut by heating the affixed ESL.

Re. Claim 25: The phrase "according to claim 22 wherein one side of the ESL...a listening subject" recited in lines 1-3 is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 3, 5 and 7 are, as best understood in view of the rejections under claim objections and 112 second paragraphs, rejected under 35 U.S.C. 102(e) as being anticipated by Croft, III et al. (US PAT. 6,201,874).

As per claim 1 Croft, III et al. teach a process of making an electrostatic transducer comprising steps of interposing and affixing a chargeable membrane between a first side and a second side, wherein the first side comprising a first stator (20) and a first circuitry (v) to the first stator and a raised structure (48) attached to the first stator and contacts the membrane, and the second side comprising a second stator (20) and a second circuitry (v) to the second stator as shown in Figs. 1 and 2, and a raised structure (50) attached to the second stator and contacts the membrane, and a means for conducting a charge to the membrane (29) as also shown in Fig. 11 (see also, col. 3, line 47 to col. 7, line 13). Croft, III et al. also disclose that non-conductive substrates having a conductive coating can be used for the electrostatic transducer (see also, col. 3, lines 47-58). The non-conductive substrates are equivalent with a PCB.

As per claim 3 the electric circuitry means (26) is provided for transmitting an electric biasing current to the membrane and the electric circuitry means (v) is provided for transmitting an electric signal to the stator as shown in Fig. 1.

As per claim 5 the raised structure (48) is equivalent with a surrounding membrane holding means. The membrane is affixed onto the surrounding membrane holding means as shown in Fig. 2.

As per claim 7 the raised structure (48) is equivalent with a surrounding membrane holding means and the raised structure (50) is equivalent with an opposing surrounding membrane holding means. The membrane is affixed between the surrounding membrane holding means and the opposing surrounding membrane holding means as shown in Fig. 2.

***Allowable Subject Matter***

11. Claims 9-16 and 19-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: As per claim 9 the prior art of record fails to disclose the claimed invention such as a central speaker area is situated internal to an area defined by the surrounding membrane holding means and having a space sufficient to permit the membrane to vibrate without contacting any part of the PCB. As per claim 19 the prior art of record fails to disclose the claimed invention such as a process of separating an excess membrane situated distal to the raised structure contacting the membrane. It is not obvious taken alone or in combination of other references fairly to suggest the claimed invention.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morrell et al. (US PAT. 4,188,513) and Thomas (US PAT. 1,839,130) are cited to further show the state of the art with respect to method of manufacturing an electrostatic speaker.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356.

Art Unit: 3729

The examiner can normally be reached on Tuesday-Friday between 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.



Paul D. Kim  
Examiner  
Art Unit 3729